THERAPEUTICS.

UNDER THE CHARGE OF

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Contribution to the Knowledge of Phloridzin Diabetes.—DR. O. LOEWI has been experimenting to establish the fact, already determined by von Mering, that subcutaneous injections of phloridzin are followed by a greater excretion of sugar than when the drug is taken by the mouth. In the repeated experiments he found, as the cause of this peculiarity, (1) that the absorption of the phloridzin in the intestine is not a complete one, but that a decomposition takes place there, whereby a product is formed, difficult of absorption, yet capable of inducing diabetes if brought directly into the blood. The proof of this lies in the fact that if an extract of the feces of a dog fed with phloridzin be injected into another animal, glycosuria will follow; (2) in order to insure the highest degree of glycosuria, a certain amount of phloridzin is required, and, no matter how much this is increased under like conditions, no more sugar will be voided. If, however, the amount of food capable of producing sugar be increased, the amount of phloridzin must be larger to insure a maximum excretion; and (3) changes in the temperature of the animal are of no appreciable effect upon the glycosuria.—*Arch. für exp. Path. u. Pharmak.*, 1902, Band xlvii., p. 48.

Action of Digitalis and Its Allies upon the Vessels.—DRS. R. GOTTLIEB and R. MAGNUS have been repeating the experiments of F. Pick, which had been considered to prove conclusively a direct constricting action of digitalis and similar drugs upon the bloodvessels. This investigator did not give any evidence of the part played by the different vessels in this process, nor upon the time the vasomotor effect takes place and its duration. The new experiments were conducted on dogs. Two entirely different methods were employed: in one the amount of blood flowing out of the veins of different regions was registered after a sufficient amount of atropine had been given to overcome the slowing of the pulse; in the other the plethysmograph was used. The experiments showed that the increased blood pressure was due to increased heart action and contraction of the vessels, and that the latter is due to peripheral action which, in case of digitoxin, is general. In the case of the other examined glycosides (digitalin, convallamarin, strophanthin), the action is restricted to the splanchnic area. There is, however, some active constriction going on here in the peripheral vessels, yet this is overcome by a passive dilatation owing to reflux of blood from the intestines and an active reflex dilatation set up by the splanchnic contraction. The general narrowing of the pathway of the blood seen with digitoxin gives a high resistance, which must be overcome by the heart; strophanthin, etc., open the vessels of the periphery, and this materially relieves this organ.—*Archiv für exp. Pathologie u. Pharmakologie*, 1902, Band xlvii., p. 135.

The Influence of Carbon Dioxide Inhalation upon the Body Temperature.—DR. N. VON WESTENRYK, to determine what effect the inhalation of small amounts of carbon dioxide would have upon the body temperature, employed rabbits with normal temperature and such in which an artificial fever had been induced by punctures of the heat centres. The animals were placed in an air-tight chamber in which some of the air was substituted for oxygen, and the experiments were conducted with 3 per cent. of volume of carbon dioxide gas. General symptoms did not appear except a slight acceleration and deepening of the respiratory movements at first, and a remarkable quietness of the animals. Within the first thirty to forty minutes the temperature dropped 0.4° C. to 1° C. and then again slowly reached the normal, even if they were brought back into the box. In the animals with fever the same observations were made, except that the reduction was 1° C. to 2° C.—*Archiv für exp. Pathologie u. Pharmakologie*, 1902, Band xlvii., p. 82.

Active Principle of Guaiacum.—DR. E. SCHAER has found that the antisyphilitic, diaphoretic, antiarthritic, and emetic properties of guaiac depend solely upon the saponin, which is most abundant in the bark, less so in the outer part of the wood, still less in the medulla, and least of all, yet in appreciable amounts, in the resin. The fact that the decoction of the wood contains the most saponin of all galenical preparations, and has been found to be the most active preparation for centuries, seems to support this theory, as do also the recent observations that other ingredients, such as guaiaconic acid, have no effect in syphilis. The author recommends that the saponin of the bark and wood be isolated in pure form, that they be compared with each other and other known forms of saponin, and that they be tried pure in the various affections for which guaiac is known to be valuable.—*Archiv für exp. Pathologie u. Pharmakologie*, 1902, Band xlvii., p. 127.

Arsenic and Beriberi.—DR. RONALD ROSS reports on the analysis of twenty samples of hair taken from Chinese patients afflicted by beriberi. Since it has been suggested that this type of neuritis might have something in common with arsenical neuritis, the results were suggestive at least. These analyses gave indefinite results as far as a causal nexus being established. In six positive evidence was given; yet this is of importance, especially since the recent cases alone were those that gave positive results; the results from patients with long-standing disease were negative. The exact site from which the hair was obtained was not recorded. As this is a matter of importance, the suggestion is offered for future study that samples should be taken from near the scalp.—*British Medical Journal*, 1902, No. 2145, p. 329.